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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/801,891	03/08/2001	Jiangnan Chen	CE08387R	7191
22917	7590	10/31/2005	EXAMINER	
MOTOROLA, INC. 1303 EAST ALGONQUIN ROAD IL01/3RD SCHAUMBURG, IL 60196			CORRIELUS, JEAN B	
			ART UNIT	PAPER NUMBER
			2637	

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. UK 09/801,891	Applicant(s) CHEN ET AL.	
	Examiner Jean B Corrielus	Art Unit 2637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6, 7, 9-11 and 14-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6, 7, 9-11, 14-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. There is no brief description of fig. 7. Page 4, the equation needs to be retyped. Correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jalloul et al in view of Elezabi.

As per claim 1, Jalloul et al discloses an apparatus fig. 3 comprising a first signal path 310 comprising a first despreader 302 a second despreader 304 coupled to the first despreader 302 a first deinterleaver coupled to the second despreader; a second signal path 320 comprising a third despreader 303 a fourth despreader 305 coupled to the third despreader 303 a second deinterleaver coupled to the fourth despreader a combiner for combining output of the first deinterleaver and the second deinterleaver. At paragraph 0022, lines 1-3, last lines and fig. 2 Jalloul further teaches that the

communication data rate (encoding rate) for a first station is different than the communication data rate (encoding rate) used in the second communication standard. More specifically, fig. 5 shows the dual mode mobile station communicating with a first cell site 401 at a first rate R_2 and a second cell site 402 at a second rate R_3 . In addition, note that because Jalloul teaches that different encoding rates are used, the first and second encoding schemes have to be used. However, Jalloul does not teach a first branch metric coupled to the first deinterleaver and a second branch metric coupled to the second deinterleaver. In the same field of endeavor, Elezabi et al discloses fig. 2 a first circuit 202 comprising and a first branch metric coupled to a first deinterleaver 202 and a summing device it further discloses a second circuit 202 comprising a branch metric coupled a second deinterleaver and the summing device, see paragraphs 0027-0034. Given that fact, it would have been obvious to one skill in the art to incorporate such a teaching in Jalloul et al so as to improve system performance as taught by Elezabi see paragraph 0008.

As per claim 2, the first despreader despreads data transmitted from a first base station 131.

As per claim 3, the second despreader despreads data transmitted from a second base station 132.

4. Claims 6, 7, 9-11 and 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okanoue et al in view of Jalloul et al

As per claim 6, Okanou et al discloses an apparatus fig. 1 comprising a first branch metric generator 18 having a plurality of symbols as input see output of 13 and outputting first branch metrics; a second branch metric generator 19 having a plurality of symbols as input see output of 14 and outputting first branch metrics; metric combiner 23 is used to combine the first branch metric and the second branch metrics. However, Okanou does not teach that the first and second plurality of symbols are encoded using first and second encoding rates, respectively. At paragraph 0022, lines 1-3, last lines and fig. 2 Jalloul teaches that the communication data rate (encoding rate) for a first station is different than the communication data rate (encoding rate) used in the second communication standard. More specifically, fig. 5 shows the dual mode mobile station communicating with a first cell site 401 at a first rate R_2 and a second cell site 402 at a second rate R_3 . It would have been obvious to one skill in the art to modify Okanou in such a way as to receive symbols encoded using respective encoding rate as taught by Jalloul in order to allow mobile station to receive and combine from neighboring base stations different signals so as to improve signal quality see paragraph 0006, lines 2-4.

As per claim 7 note that Jalloul teaches that the first encoding rate (transmission rate) and the second encoding rate (transmission rate) are different hence the number of symbols in the first and second plurality of symbol have to be different. Given that fact it would have been obvious to one skill in the art to configure Okanou in such a way as to generate the first and sequence comprising different Number of symbols and the reason to do so would have been the same as provided above with respect to claim 6.

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As per claim 9, Jalloul et al further teaches transmitting a first signal stream from a first base station 131 and transmitting a second signal from a second base station 132. Given that fact, it would have been obvious to one skill in the art to incorporate such a teaching in Okanoué in order create transmission diversity.

As per claim 10, Okanoué and Jalloul teaches every feature of the claimed invention but does not explicitly teach a logic for receiving the first and second signal streams and outputting the symbols with zeros inserted at various time intervals. However, providing a device or logic for inserting zeros into a signal stream is old and well established in the art. Given that it would have been obvious to one skill in the art to modify Okanoué and Jalloul by incorporating a logic for inserting zeroes into the symbol streams so as to ensure that the signals are transmitted at a predetermined constant rate.

As per claim 11, see claim 6

As per claim 14 see claim 9.

As per claim 15, see claim 9.

As per claim 16, note that because Jalloul teaches that different encoding rates are used, the first encoding scheme has to be used. It would have been obvious to one skill in the art to use ~~a use~~ a first encoding rate in Okanoué and the motivation to do so would have been the same as provided above in reference to claim 6.

As per claim 17 note that because Jalloul teaches that different encoding rates are used, the second encoding schemes has to be used. It would have been obvious to

one skill in the art to use a use a second encoding rate in Okanou and the motivation to do so would have been the same as provided above in reference to claim 6.

As per claim 18 see claim 16.

As per claim 19, see claim 18.

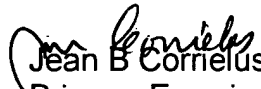
Response to Arguments

5. As per applicant argument Applicant argument with respect of Takaki not disclosing the limitation of "combining the branch metrics" are persuasive and the rejection to claims 6, 7, 11 and 14 in light of Takaki has been withdrawn. It is alleged that Jalloul only teaches the encoding signal using an encoding rate R2 and Jalloul does not teach encoding signals using different encoding rates. It is further et However, it is noted at paragraph 0022, lines 1-3, that Jalloul teaches that the communication data rate (encoding rate) for a first station may be different than the communication data rate (encoding rate) used in the second communication standard. In addition, note fig. 5 where the rate R3 used by 402 is different than a rate R2 used by 401. It is alleged that Elezabi does not teach the limitation of combining signals having different encoding rates. However, it is noted the primary reference to Jalloul teaches such a limitation. Elezabi was only introduced to show that a metric calculator coupled to an interleaver is well known in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B. Corrielus whose telephone number is 571-272-3020. The examiner can normally be reached on Maxi-Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jean B Corrielus
Primary Examiner
Art Unit 2637

10-28-05